

REMARKS

This paper is responsive to the Office Action dated April 25, 2008. Claims 1, 3-7 and 10-14 are currently pending. Claims 1, 3-7 and 10-14 stand rejected. Claims 1, 6, 7 and 12-14 have been amended. Support for all amended claims can be found in the specification, and no new matter has been added by these amendments. Reconsideration of the claims in view of the amendments and the following remarks is respectfully requested.

Claim Rejections Under 35 U.S.C. § 103

Claims 1, 3-6 and 13 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Publication No. 2002/0150394 to *Osakabe*, in view of U.S. Patent No. 5,425,013 issued to *Fennema* and U.S. Patent No. 5,157,642 issued to *Tsukamura*. Without conceding the merits of the rejection, Applicants respectfully submit that the amended claims overcome this rejection.

Claim 1, as amended, recites:

An optical disk apparatus for recording data on a recordable optical disk having a power calibration area and a recording management area both located on an inner periphery thereof, and an area located radially inwardly of the power calibration area and the recording management area, the optical disk apparatus comprising:

a laser diode for emitting a laser beam;
a laser diode driver module for driving said laser diode;
an objective lens for constricting the laser beam;
objective lens driving means for driving said objective lens in a radial direction of said recordable optical disk; and

control means for controlling said laser diode driver module and said objective lens driving means,

wherein said control means controls said objective lens driving means such that the laser beam is irradiated on the area but is not irradiated on the power calibration area or the recording management area while controlling said laser diode driver module for emitting the laser beam to observe an optical amount of the irradiation for the purpose of adjusting a laser power,

wherein the area is an area where light returned from said optical disk is not substantially detected.

An optical magnetic disk is commonly provided with a mirror area at an inner periphery or an outer periphery of a power calibration area. However, the present invention, as described in claim 1, is not directed to targeting an optical magnetic disk. In the present

invention, the term "optical disk" does not include an optical magnetic disk having a "mirror area". Therefore, claim 1 has been amended to change "a mirror area" to "an area".

Furthermore, claim 1 has been amended to indicate that "the area is an area where light returned from said optical disk is not substantially detected." In order to read information recorded on the optical disk, it is necessary to detect light returned from the area where the information of the optical disk is recorded. In the invention as described in claim 1, a laser beam is emitted for the purpose of adjusting power at a position other than the area as indicated above.

As described in the specification, when the laser beam is emitted for adjusting power at a region where the information is recorded or the information may be recorded, the recorded information is adversely affected or the information is erroneously recorded. The invention as described in claim 1 is provided in order to prevent the occurrence of such a failure. (See page 17, lines 13-21).

One of the features of the claimed invention provides that an area where a laser beam is not conventionally irradiated for recording or reproduction (i.e., the area where light returned from the optical disk is not substantially detected) is irradiated with the laser beam. In other words, conventionally, the laser beam is irradiated on the optical disk for obtaining information from the optical disk or for writing information on the optical disk. Even though an objective lens provided on an optical pickup is movable to an area inwardly or outwardly beyond the power calibration area, where no information exists or information may not be written, it is not inevitable to irradiate a laser beam on such an area, because it is not necessary to record or reproduce the information on or from the area.

In contrast, *Osakabe* discloses placing a bar code in a mirror area. (Fig. 3). The bar code records track pitch information and linear velocity information. The optical pickup can read the bar code prior to recording and reproducing of information on the disk. (Paragraph [0035]).

Fennema discloses a laser that is actuated to emit a minimal or controlled intensity beam of radiation for enabling sensing a type identification on a received record medium and then the beam of radiation is focused. An optical means is actuated to sense the

medium type identification and then to indicate the type of received medium. (Col. 3, lines 17-25).

Tsukamura discloses a mirror area that is provided to detect power of a laser spot. The intensity of the laser power can be controlled by detecting the reflected light of the laser beam irradiating the mirror area. (See column 1, lines 48-53).

Neither *Osakabe*, *Fennema* and *Tsukamura* nor any of the other cited references, alone or in combination, disclose all of the features recited in independent claim 1. Specifically, *Osakabe*, *Fennema* and *Tsukamura* do not disclose an "optical disk apparatus for recording data on a recordable optical disk having a power calibration area and a recording management area both located on an inner periphery thereof, and an area located radially inwardly of the power calibration area and the recording management area, the optical disk apparatus comprising:... control means... [that] controls said objective lens driving means such that the laser beam is irradiated on the area but is not irradiated on the power calibration area or the recording management area while controlling said laser diode driver module for emitting the laser beam to observe an optical amount of the irradiation for the purpose of adjusting a laser power, wherein the area is an area where light returned from said optical disk is not substantially detected." For at least this reason, claim 1 is allowable over the cited art.

Claims 3-6 depend from claim 1. As discussed above, claim 1 is allowable. Thus, claims 3-6 are also allowable for at least the same reasons, as well as on their own merits.

Independent claim 13, as amended, recites features that are similar to the features recited in amended claim 1. As discussed above with reference to claim 1, the cited art does not teach these features. Thus, claim 13 is also allowable over the cited art for at least the same reasons.

Claims 7, 10-12, and 14 are rejected under 35 U.S.C. §103(a) as being unpatentable over *Osakabe*, *Fennema* and *Tsukamura* in view of US Patent Publication No. 2002/0110065 to *Wang*. Without conceding the merits of the rejection, Applicants respectfully submit that the amended claims overcome this rejection.

Claim 7, as amended, recites:

An optical disk apparatus for recording data on a recordable optical disk having a power calibration area located on an outer periphery thereof, and an area located radially outwardly of the power calibration area, the optical disk apparatus comprising:

- a laser diode for emitting a laser beam;
- a laser diode driver module for driving said laser diode;
- an objective lens for constricting the laser beam;
- objective lens driving means for driving said objective lens in a radial direction of said recordable optical disk; and
- a control circuit for controlling said laser diode driver module and said objective lens driving means,

wherein said control circuit controls said objective lens driving means such that the laser beam is irradiated on the area but is not irradiated on the power calibration area while controlling said laser diode driver module for emitting the laser beam to observe an optical amount of the irradiation for the purpose of adjusting a laser power,

wherein the area is an area where light returned from said optical disk is not substantially detected.

As discussed above, *Osakabe* discloses placing a bar code in a mirror area. The bar code records track pitch information and linear velocity information. The optical pickup can read the bar code prior to recording and reproducing of information on the disk.

Also discussed above, *Fennema* is directed to a laser that is actuated to emit a minimal or controlled intensity beam of radiation for enabling sensing a type identification on a received record medium and then the beam of radiation is focused. An optical means is actuated to sense the medium type identification and then to indicate the type of received medium.

Also discussed above, *Tsukamura* discloses a mirror area for detecting laser power.

Wang discloses an outer power calibration area. (Fig. 2).

Neither *Osakabe*, *Fennema*, *Tsukamura* and *Wang* nor any of the other cited references, alone or in combination, disclose all of the features recited in independent claim 7. Specifically, *Osakabe*, *Fennema*, *Tsukamura* and *Wang* do not disclose an "optical disk apparatus for recording data on a recordable optical disk having a power calibration area located on an outer periphery thereof, and an area located radially outwardly of the power calibration area, the optical disk apparatus comprising: a control circuit... [that] controls said objective lens driving means such that the laser beam is irradiated on the area but is not irradiated on the power

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calibration area while controlling said laser diode driver module for emitting the laser beam to observe an optical amount of the irradiation for the purpose of adjusting a laser power, wherein the area is an area where light returned from said optical disk is not substantially detected." For at least this reason, claim 7 is allowable over the cited art.

Claims 10-12 depend from claim 7. As discussed above, claim 7 is allowable. Thus, claims 10-12 are also allowable for at least the same reasons, as well as on their own merits.

Independent claim 14, as amended, recites features that are similar to the features recited in amended claim 7. As discussed above with reference to claim 7, the cited art does not teach these features. Thus, claim 14 is also allowable over the cited art for at least the same reasons.

Accordingly, withdrawal of the rejection of claims 1, 3-7 and 10-14 under 35 U.S.C. 103(a) is respectfully requested.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 206-467-9600.

Respectfully submitted,

/John J. Farrell/

John J. Farrell
Reg. No. 57,291

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, Eighth Floor
San Francisco, California 94111-3834
Tel: 206-467-9600
Fax: 415-576-0300
JJF:kbh
61439697 v1